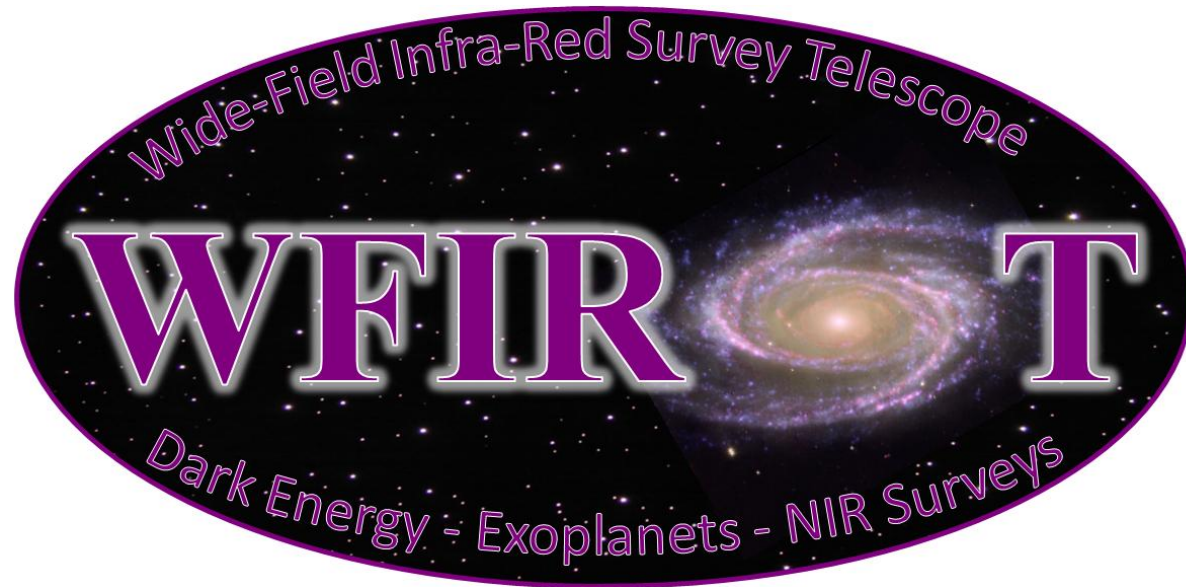


WFIRST

AFTA - Wide-Field Infrared Survey Telescope



## Study Team Overview

Kevin Grady

November 20, 2014

## Study Team Overview (1 of 3)

- Completed design cycle #5 - will be the basis of the 2015 WFIRST Study Report in January.
  - Significant improvement to payload structural design.
  - Simplified IFU design.
- Coronagraph technology activities and IR detector fabrication & test continue to make excellent progress.
- Budget: FY15 budget unclear, operating under CR guidelines until Dec 11, or until a budget is passed.
- IR detectors
  - All banded array detectors fabricated and tested.
  - Extensive testing of detectors and data analysis at GSFC Detector Characterization Lab (DCL) – full array lots selected and in fab.
  - Performance testing of the detectors to continue this year.
- Widefield grism test elements delivered and characterized; completed grism mount design and parts in fab.

## Study Team Overview (2 of 3)

- Element wheel prototype parts fabricated and assembly in process.
- Widefield filter coating passband assessment in process.
- Significant effort (Exelis/JPL/GSFC) completed assessing options for mechanical interface between instruments and telescope aft metering structure.
- Telescope developed detailed plans to support costing. Continuing telescope material characterization activities.
- Payload team converging on a plan for ETE optical testing.
- Completed first two technology milestones for coronagraph and IR detectors; 2<sup>nd</sup> IR detector to be briefed to TAC in next couple weeks.
- Coronagraph Shaped Pupil HCIT testbed producing great results. Fabricated HL mask looks promising.

## Study Team Overview (3 of 3)

- Spacecraft: Ka-band modulator prototype progressing, high rate avionics architecture developed, high speed science testbed defined.
- Continuing Level 2 Science Requirements Document development.
  - ***Need support from SDT.***
- Completed initial draft of Mission Requirements Document (MRD).
- Science simulation activities proceeding and HQ ROSES awards near selection.
- Neil Gehrels and Bruce Macintosh presented WFIRST status to the Committee on Astronomy and Astrophysics.
- Significant effort updating mission life-cycle cost.
- Considerable effort expended on several pre-CATE activities with Aerospace.